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ABSTRACT

Possible threats and promises perceived by counselors when computers are introduced into the counseling field are examined in this fact sheet. Computer-assisted counseling and computer-managed counseling are discussed. A seven-step model for designing a "hi-tech" counseling program is presented. (NB)

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HIGHLIGHTS

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...An ERIC/CAPS Fact Sheet

Counselors and Computers

Computers in Counseling: A Threat or a Promise?

The Threat: Many counselors fear that computers will mechanize the counseling process, depriving clients of the important ingredients of warmth, empathy, and genuineness characteristic of effective counseling interactions. If counselors try to make computers serve too many or inappropriate functions, this could very well happen. It is imperative, therefore, that the computer be viewed as an extension of, not a substitute for, the counselor.

A second major area of concern is confidentiality. Computers make it possible to collect and store more data on clients for longer periods of time. Many counselors as well as clients fear this may increase the potential for unauthorized access, particularly if the information is stored in the data bank of a large computer network. Further, if the data are not systematically reviewed, it is possible for gross errors to go undetected. To address these problems, counselors and others are advised to (1) limit confidential data to what is appropriate and necessary for the services provided; (2) destroy the data once the value to providing services no longer exists; (3) ensure accurate and complete data; (4) restrict access to confidential data to appropriate professionals through the use of the best computer security methods available; and (5) ensure that it is not possible to identify any particular individual with confidential data accessible through a computer network.

A third area of potential danger is the tendency for clients to interpret the objectivity of the computer as evidence that the information obtained is completely valid and reliable, i.e., the "truth." This can be a problem especially in computer-assisted testing, assessment, and information retrieval. Here, it is imperative that counselors: (1) monitor computer use regularly for potential equipment malfunctions; (2) use computer programs that accurately reflect valid test and measurement principles; (3) critically assess the extent to which computer programs are based on sound counseling and development theories; (4) regularly check and update information; and (5) help clients interpret results in light of other relevant factors.

The Promise: If the safeguards itemized above are observed, computers can enhance and multiply the counselor's activities. This can be accomplished through computer-*assisted* counseling and/or computer-*managed* counseling. Computer-assisted counseling (CAC) parallels computer-assisted instruction (CAI) and may be defined as an interactive counseling technique in which a computer is used to present information, solicit and monitor responses, and select and present additional information in accordance with individual client needs. Computer-managed counseling (CMC) parallels computer-managed instruction (CMI) and may be defined as the use of a computer to maintain and analyze client data and to document and analyze the counseling process. Computer-managed counseling may also include administrative uses that are not directly related to the counseling process, but increase the amount of time counselors have available for clients.

Computer-assisted counseling. Three significant advantages of computer-assisted counseling are objectivity, availability, and the capacity to store and retrieve large amounts of information. While it can be argued that both counselors and computers can, on occasion, make inaccurate assumptions about particular clients, computers generally treat all clients objectively and are not biased by gender or personal, social, or ethnic characteristics. This objectivity can be very important, whether potential bias is real on the part of the counselor or simply perceived as real on the part of the client.

Where the client-to-counselor ratio is very high, as it is in most schools, computer-assisted counseling can multiply the counselor's efforts by being available when the counselor isn't. As long as clients are adequately prepared to use the computer and receive follow-up help in interpreting results, more clients can receive more information that is often more accurate than can be provided by the counselor in a one-to-one counseling situation.

The tremendous capacity to store and retrieve information is probably the computer's most useful characteristic. If we consider also the computer's speed and ability to select, sort, and combine information, there is no doubt that the computer can accomplish tasks that are humanly impossible.

Among the promising applications of computer-assisted counseling are: selection and retrieval of career information; selection and retrieval of educational information; career guidance; educational guidance; aptitude and achievement testing; interest assessment; test practice/preparation (e.g., SAT); skill building (e.g., problem solving, decision making); and self-assessment.

Computer-managed counseling. Even if computers are not available for direct client use, counselors can use them for clerical and administrative tasks so as to reduce their load of tedious paperwork. This frees them to spend more time with clients. Some counselors fear that the tedious paperwork will simply be replaced by tedious computer work. However, based on the rapidly growing body of literature and the large number of counselors registering for computer-oriented workshops, many counselors are finding that they can become computer-proficient quite easily and that computers do, in fact, allow them to do more in less time.

Another important advantage of computer-managed counseling is the extensive amount of documentation made possible. With computerized record-keeping systems, counselors can now present "hard" data to meet the increasing demands for accountability.

Among the promising applications of computer-managed counseling are: client/student record-keeping; counseling activity logs; attendance records; scheduling; grading; transcript production; resource files; word processing (e.g., report writing, personalized letters); and academic progress reports.

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Designing a Hi-Tech Counseling Program: A Seven-Step Model

1. Analyze your program for potential computer applications. Carefully consider the objectives and outcomes that you desire from a counseling or guidance program, as well as the activities and resources that are required to meet those objectives and outcomes. Are there new objectives or emphases which you would like to see present in the program? Are new resources available which will enable you to supplement present approaches in your counseling and guidance program? Are there activities or services which you are currently providing but which are inefficient? Probably the key consideration in the decision to purchase a computer for guidance and counseling purposes is the area of inadequate services. Rather than making broad sweeping changes that may eliminate those things that you are currently doing w[illegible] concentrate on those areas where the outcomes are not adequate either in scope or quality.

2. Investigate available computer resources. A vast array of resources on computer applications and uses is available to the potential user. Computer vendors publish extensive information. A whole new line of computer magazines has appeared; educational journals in the counseling and guidance fields as well as journals about computers used in a variety of educational settings are also available. Software catalogs provide information about the availability and the quality and use of different types of software. Resources in Computer Education (RICE), an online database developed by the Northwest Regional Educational Laboratory, is a particularly useful resource, providing more than 1500 descriptions of microcomputer courseware for elementary and secondary education. Many states also have low-cost, regional resources for information on computer software. Additionally, ERIC/CAPS has acquired considerable information on software particularly useful in counseling and human services.

Be careful about information overload. It is possible to be so deluged with information and to strive so diligently to obtain the last word, that one is immobilized by an insurmountable body of information on choices and opportunities. Identify a few sources that seem useful and reliable and stay with them.

3. Select computer uses which will meet your program needs. CAC and CMC, as described earlier, are the two basic approaches to the use of computers in counseling. Practically all counseling and guidance programs will profit from the use of CMC. Judicious use of the support computers can provide will contribute to the overall efficiency of almost all programs. While potentially offering the greatest impact on service to clients, CAC is more expensive and will require a careful review of the objectives and desired outcomes of your program and the suitability of a computer approach for achieving your aims. In either case, careful thought and planning and low-risk experimentation are highly desirable.

4. Match software to program needs. Frequently, hardware decisions are made before considering whether or not software is available to achieve program objectives and outcomes. Reverse the process — analyze available software and relate it to identified program needs. In particular, go beyond the name of the software and consider who developed it, the evidence for its effectiveness, and how potential users respond to it. A no-obligation tryout or experience with software is very important. Although, in many ways, evaluating software is more difficult than evaluating printed media, we should no more select software based on its cover and advertising hype than we would textbooks or other resources.

5. Match the hardware to the software. After identifying the software you want from available options, you are in a good position to select appropriate hardware. At this point, you are likely to find that the perfect system is impossible to find and that there must be trade-offs. Some systems will meet some criteria, doing some things well, but others very poorly. Thus, it is essential to have clearly identified priorities and objectives before attempting to make a selection.

A particular caution is the need to avoid the multiple use temptation, i.e., the idea that one computer can do all things for all people in a given system. Computers used for assistance in management, for example, may not be at all suitable for CAC uses. The notion of one omnibus computer that can perform all functions for a program or system is more fancy than fact.

6. Invest in "personware." The bottom line in the effectiveness of your computer program is the attitudes and skills of the people responsible for its use. Their interest and skill, plus the ability to model the skillful and turned-on user will greatly influence not only the extent to which clients use the computer but also how wisely. In your budget set aside funds to provide both initial and on-going preparation of counseling personnel in the use of computers. Additionally, it is important to provide "play time," or the opportunity to explore the mechanics of the computer and its myriad applications and uses.

7. Implement and evaluate. While thinking about and developing a plan for the use of computers in counseling is important, actual use and the evaluation of its effectiveness are essential. A key to successful implementation is to be prepared for people's resistance and to attend to their technical and affective concerns about computer use. Another important consideration is insuring equity of access and use of computers. If not given adequate emphasis, it is possible that certain groups, such as minorities and women, will not have their fair share in computer programs.

One effective way to win the confidence of those involved in the computer program is to design the evaluation strategy before implementation. All persons concerned with the program should be aware that decisions about the system will be made on reasoned and public criteria. It is equally important to analyze and report evaluation results in a form meaningful to others as soon as possible. Early feedback of even partial results is better than a voluminous final report which appears long after important decisions about the system have been made.

Note: A list of recommended resources on this topic is available upon request. Please direct inquiries to ERIC/CAPS User Services, 2108 School of Education, The University of Michigan, Ann Arbor, MI 48109-1259 (313/764-9492).

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